NANO OPTICS

Institut für Physik

Seminar

Nanodiamond quantum thermometers and their applications

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Location: Institut für Physik, Gerthsen-Hörsaal
Newtonstr. 15, 12489 Berlin

Zoom:
https://hu-berlin.zoom.us/j/64567336962?pwd=QjhyMW5SbFVBZWVNRWJrTFBFN2Rtdz09
Meeting-ID: 645 6733 6962
Passwort: 607723

Prof. Oliver Benson (Nano-Optics)

Institut für Physik

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Abstract

Fluorescent nanodiamonds are stable and nontoxic fluorescent probes, which are suited to chemical and biological analysis.

Recently they have been intensively studied for quantum applications because their fluorescence intensity is electron spin dependent and they can operate quantum enhanced sensing of magnetic field, temperature, etc of microenvironment.

In this talk, I will talk about our recent activities on the applications of this technology to temperature sensing in biological samples [1,2].

[1] Fujiwara et al., Sci. Adv. 6, eaba9636 (2020).
[2] Oshimi et al., Lab Chip 22, 2519 (2022).